

Stormwater Program Progress Report

This report covers activities that occurred between the following dates:

1/1/2016 to 12/30/2016

Date Report Prepared: 12/22/2016

For questions regarding this report contact:

Lou Spina
41 West Street
Cromwell, CT 06416

Stormwater Program Permit Information

1. Permitting Authority: CT DEEP	
2. Permit Number: DEP-PED-GP-021	3. Permit Type: MS4
4. Permit Name: STORMWATER MANAGEMENT PLAN	
5. Date Issue: 1/9/2004	6. Date Expire: 6/30/2017

General Information for MS4 Operator

1. Operator Name:	Anthony Salvatore		
2. Operator Title:	Town Manager		
3. Represented Entity:	Town of Cromwell		
4. Mailing Address:	41 West Street		
5. Mail City, State, Zip:	Cromwell, CT 06416		
6. Phone Number:	(860) 632-3410		
7. E-Mail Address:	asalvatore@cromwellct.com		
8. Co-Permitting With:			
9. Population: 14,077	Households: 5,501	Area (sq mi): 14	
10. Official Website:	cromwellct.com		

General Information for Primary Contact Person

1. Name:	Lou Spina
2. Title:	Director of Public Works
3. Phone Number	(860) 632-3420
4. E-Mail Address:	lspina@cromwellct.com

General Information for Secondary Contact Person

1. Name:	Jon Harriman
2. Title:	Town Engineer
3. Phone Number	8606323465
4. E-Mail Address:	jharriman@cromwellct.com

General Information for Receiving Waters

Receiving Water Lists: Listed below are all the identified receiving waterbodies to which identified outfalls discharge.

Receiving Streams (creek, stream, river, etc.)	Receiving Waterbodies (lake, wetland, ocean, etc.)	Receiving Watersheds
MATTABESSET RIVER CONNECTICUT RIVER	N/A	MATTABESSET REGIONAL BASIN (4600) CONNECTICUT MAIN STREAM (4000)

Public Outreach and Education-'16

Details of BMPs and Work Performed for Them

Develop education and outreach

Responsible Party: Jon Harriman. P.E., Town Engineer

Develop and implement a public education and outreach program to distribute educational materials to the community,
Conduct equivalent outreach activities about the detrimental effects of storm water on local water bodies and the steps that can be taken

Start Date: 12/19/2016

End Date: 12/20/2016

Percentage of work that has been accomplished for this BMP: 100 %

Work performed for the BMP listed above

Date: 1/1/2016 **Responsible Party:** Jon Harriman. P.E., Town Engineer

Information Placed on Engineering Department website

The following clickable links were placed on the Town's website within the Engineering Department's page:

1. Storm Drain Stenciling Fact Sheet
2. Car Care for Cleaner Water Fact Sheet
3. Managing Leaves and Yard Trimmings
4. Better Homes and Groundwater - A Homeowner's Guide
5. Lawn Watering
6. Lawn Weed Control
7. Lawn and Garden Fertilizers
8. Lawn and Garden Pesticides
9. Pet Waste and Water Quality
10. Cleaning Up Stormwater Runoff

Date: 1/1/2016 **Responsible Party:** Jon Harriman. P.E., Town Engineer

Information Disseminated to the Public

1. Through the office of the Department of Public Works (DPW) , the following information pamphlets had been disseminated to the public:

a. Wisconsin Department of Natural resources:
"Better Homes and Groundwater"

b. Wisconsin Department of Natural resources:
"Car Care for Cleaner Water"

c. Wisconsin Department of Natural resources:
"Cleaning Up Stormwater Runoff"

d. Wisconsin Department of Natural resources:
"Erosion Control for Home Builders"

e. Wisconsin Department of Natural resources:
"Polluted Urban Runoff" A Source of Concern

f. Wisconsin Department of Natural resources:
"Storm Drain Stenciling"

g. Wisconsin Department of Natural resources:

"Storm Sewers Beneath Our Feet"

h. Wisconsin Department of Natural resources:
"Lawn & Garden Fertilizers"

i. Wisconsin Department of Natural resources:
"Lawn Garden Pesticides"

j. Wisconsin Department of Natural resources:
"Lawn Watering"

k. Wisconsin Department of Natural resources:
"Lawn Weed Control"

l. Wisconsin Department of Natural resources:
"Pet Waste and Water Quality"

m. Wisconsin Department of Natural resources:
"Managing Leaves and Yard Trimmings"

n. Wisconsin Department of Natural resources:
"The Wealth of Waterways"

o. City of Columbia Missouri:
"Glossary of Stormwater Terms"

2. Completion of Stream identification signs at intersections of all roads and major streams within Cromwell.

3. Installation/Use of portable public display structure for the Town's Library and public buildings. Completion of Public display at Town Hall.

4. Revised database of all agencies, departments, commissions, public groups and business and commercial establishments for all future mailings.

5. Supported the CRCOG "HazWaste Collection" Program with two collection events (April and November).

6. ~~Disseminated MC4 Annual Report on Town website~~

Date: 5/2/2016 **Responsible Party: Lou Spina, Director of Public Works**

Dog waste notification

Postings with information relative to pet waste issues were posted at all of the passive recreation parks in Town.

Public Participation / Involvement -'16

Details of BMPs and Work Performed for Them

Promote Citizen Participation

Responsible Party: *Jon Harriman. P.E., Town Engineer*

Year Five and beyond: Activities begun in years one through five will continue and will be modified as necessary. As the program moves to watershed-based education, messages and education activities will continue to be directed to the Town's broad audience

Start Date: 12/19/2016

End Date: 12/20/2016

Percentage of work that has been accomplished for this BMP: 100 %

Work performed for the BMP listed above

Date: *1/1/2016* **Responsible Party:** *Jon Harriman. P.E., Town Engineer*

Source to Sea Cleanup

local students participated in the 20th Anniversary of the Source to Sea Cleanup. While not a part of the MS4 it is the impaired receiving waterbody of most of the Town's drainage.

Date: *5/2/2016* **Responsible Party:** *Lou Spina, Director of Public Works*

Dog waste bags

At the new dog waste signs, a station to distribute dog waste bags was set up with trash cans available to properly dispose of dog waste at all passive recreation parks in Town.

Date: *10/28/2016* **Responsible Party:** *Lou Spina, Director of Public Works*

Citizen Participation

Through advertising the Town of Cromwell had 84 households participate in Household Hazardous Waste Collection days (spring and fall). These were sponsored and organized regionally by the Lower CT River Valley Council of Governments. Participation is voluntary.

Date: *11/16/2016* **Responsible Party:** *Jon Harriman. P.E., Town Engineer*

Provide MS4 Annual Report for public review and comment

The 2015 MS4 Annual Report was maintained on the Town website and available for review and comment by the Public. A draft copy of the 2016 MS4 Annual Report was made available at the Town Hall.

As of 12/19/2016 there has been no public comment.

Illicit Discharge Detection and Elimination - '16

Details of BMPs and Work Performed for Them

Detect and eliminate illicit discharges

Responsible Party: Jon Harriman, P.E., Town Engineer

Water Quality Monitoring
Dry Weather Monitoring Program
Wet Weather Monitoring Program
Illicit Connection / Illicit Discharge

Inventories
Review and refine watershed inventories
Assess threat to water quality priorities and revise, if necessary
R

Start Date: 12/19/2016

End Date: 12/20/2016

Percentage of work that has been accomplished for this BMP: 100 %

Work performed for the BMP listed above

Date: 1/1/2016 **Responsible Party:** Jon Harriman, P.E., Town Engineer

Stormwater quality sampling

1. Continued MS4 storm water sampling during wet weather events and dry weather events. In an interesting turn of events the indicator E.Coli samples for all six sampling locations had test results of "present". This result makes it difficult to track the progress that was noted last year in reducing this pollutant. Due to the ongoing drought, and the late date that the Town learned what "present means" a makeup sample was not able to be collected. Graphing of the test results over several years for all components of MS4 sampling is attached to the end of this years sampling results.

2. Continued sampling the Town Transfer Station and Highway Garage as per the Industrial Stormwater Permit requirements. 4 sampling efforts made, one each quarter.

Date: 1/1/2016 **Responsible Party:** Jon Harriman, P.E., Town Engineer

Continuation of DPW's GIS mapping

1. Expansion of DPW's GIS mapping program of the storm water system; Identifying the entire Town's stormwater conveyance system, including the State DOT's drainage system within the Town's boundaries. Town owned structures included approximately 300 outlet structures (headwalls, flared ends, open pipes) and 1500 inlet structures (manholes, catch basins, etc.), and 133,000 linear feet of pipe. The Town contracted with AppGEO to continue the updating of the MS4 system. At this point the mapping updates generally consist of the addition of stormwater mapping of newly constructed subdivisions and small commercial developments.

2. Continued DPW's Asset Management Program for storm water inventory.

Date: 1/20/2016 **Responsible Party:** Lou Spina, Director of Public Works

Sanitary Sewer Study

A sanitary sewer Infiltration and Inflow study performed by Cardinal Engineering Associates in 2015 was completed and reviewed by the Cromwell WPCA. Areas for rehabilitation (\$1,445,000) work have been identified and funded. This rehabilitation work is to begin in calendar year 2017. A complete list of the areas to be rehabbed is beyond the capabilities of this reporting system, but is available at the Cromwell Town Hall sewer department. It should be noted that there are sewer repairs/rehab identified near the impaired waters of Coles Brook, Willowbrook, Mattabassett River and tributaries to the CT River.

Construction Site Runoff Control - '16

Details of BMPs and Work Performed for Them

To use a variety of controls to reduce pollution

Responsible Party: Jon Harriman, P.E., Town Engineer

Land Use Planning

1. Make storm water information available on the department web site.

Complete conservation and land use elements update.

Coordinate with the appropriate departments to consider amendments to the street design and the drainage design

Start Date: 12/19/2016

End Date: 12/20/2016

Percentage of work that has been accomplished for this BMP: 100 %

Work performed for the BMP listed above

Date: 1/1/2016

Responsible Party: Jon Harriman, P.E., Town Engineer

Construction Phase runoff control

Construction phase erosion control inspections were performed to verify compliance with the stormwater runoff control requirements spelled out in section 5.4 of the Cromwell Zoning Regulations. The Zoning Enforcement Office maintained erosion control bonds and inspection records for all known (permitted) construction activities. A monthly report is provided to the Planning & Zoning Commission and the Inland Wetlands Commission.

1. Town staff in the engineering, planning and zoning enforcement departments continued to perform routine inspections of private site developments.

2. Town staff in the engineering, planning and zoning enforcement departments performed routine inspections of the following subdivisions under construction:

Sunset Ridge (Thomas Court) accepted as a Town Road this fall

North Woods (Fawn Drive, Bucks Crossing)

3. Town staff in the engineering, planning and zoning enforcement departments performed inspections of CIP projects undertaken by the Public Works Department:

On street Parking construction - Veterans Memorial Green

Reconstruction of County Line Drive

Dog Park drainage modification

Date: 1/1/2016

Responsible Party: Jon Harriman, P.E., Town Engineer

Control Construction site runoff - planning stage

1. Engineering Department continued to review and comment on applications for subdivision and siteplans through Inland Wetlands and Planning and Zoning. The CTDEP Stormwater Quality Manual (2004) was used as a guideline.

Post Construction Runoff Control - '16

Details of BMPs and Work Performed for Them

Reduction of Pollution for Permanent BMPs

Responsible Party: Lou Spina, Director of Public Works

1. Develop cooperative partnerships with industry and trade associations
Develop outreach plan with trade and industry associations
Adjust program based on conclusions and recommendations of Annual Report Perform routine inspections
Continue to facilit

Start Date: 12/19/2016

End Date: 12/20/2016

Percentage of work that has been accomplished for this BMP: 100 %

Work performed for the BMP listed above

Date: 1/1/2016

Responsible Party: Lou Spina, Director of Public Works

Long Term O&M - Public infrastructure

1. The Highway Division replaced four failed catch basin structures that had collapsed allowing surrounding soils into the stormwater system. These catch basins were older and of block and mortar construction. They were replaced with precast units that should not fail in the same manner.

Date: 1/1/2016

Responsible Party: Jon Harriman, P.E., Town Engineer

Long Term O&M - Private developments

1. Continued the implementation of a policy through planning & zoning & wetlands whereby any approved site plan would require the submission of a report of the annual O&M stormwater measures completed to Town staff by January 31 of the following year.

Date: 1/1/2016

Responsible Party: Lou Spina, Director of Public Works

Reduction of Pollution

1. Supported the CRCOG "HazWaste Collection" Program - 2 events (April and November 2016)

Pollution Prevention / Good Housekeeping - '16

Details of BMPs and Work Performed for Them

Catch Basin Inspection/Cleaning

Responsible Party: Lou Spina, Director of Public Works

Routinely Inspect and Clean Catch Basins to reduce pollution. Catch basins must be emptied periodically to reduce the discharge of pollutants to the receiving water bodies.

Start Date: 12/19/2016

End Date: 12/20/2016

Percentage of work that has been accomplished for this BMP: 100 %

Work performed for the BMP listed above

Date: 1/1/2016

Responsible Party: Lou Spina, Director of Public Works

Catch Basin Cleaning

The Town of Cromwell Contracted with Shaw Vac Services for this year. 828 catch basins were inspected and cleaned this year. The Town tries to get approximately 1/3 of the total catch basin receivers cleaned in any one year. Since switching from sand to treated salt, the basins do not fill fast enough to warrant more frequent cleaning (based on the inspections performed).

Storm water pond maintenance

Responsible Party: Lou Spina, Director of Public Works

Maintain all Town owned detention/retention ponds on an annual basis or as specified in each pond's O&M plan (if available).

Start Date: 1/1/2016

End Date: 12/23/2016

Percentage of work that has been accomplished for this BMP: 100 %

Work performed for the BMP listed above

Date: 1/1/2016

Responsible Party: Lou Spina, Director of Public Works

Annual maintenance of storm water ponds

The Town Highway Department crews maintained all Town owned storm water maintenance ponds. Sediment and trash were removed, and mowable areas were cut twice this year. Brush and trees were cut (stumps left in place).

Street Sweeping Program

Responsible Party: Lou Spina, Director of Public Works

Implement a plan to sweep all Town owned streets and Municipal paved surfaces (parking lots) twice per year, or more as needed.

Start Date: 12/19/2016

End Date: 12/20/2016

Percentage of work that has been accomplished for this BMP: 100 %

Work performed for the BMP listed above

Date: 4/19/2016

Responsible Party: Lou Spina, Director of Public Works

Street Sweeping

All Town owned streets and municipal parking lots were swept by the Town street sweeping machine in April of 2016. A follow up sweep was performed following the annual leaf pickup which was during the months of November and December this year. Spot street sweeping was conducted as needed, either by observation or citizen complaint.

Town Vehicle and truck washing

Responsible Party: Lou Spina, Director of Public Works

Minimize wash water runoff caused by the washing of Town of Cromwell pool vehicles.

Start Date: 12/19/2016

End Date: 12/20/2016

Percentage of work that has been accomplished for this BMP: 100 %

Work performed for the BMP listed above

Date: 1/1/2016 **Responsible Party: Lou Spina, Director of Public Works**

Vehicle and truck washing contracts

The Town of Cromwell Contracted with Classic Auto Wash, 23 Shunpike Road, for the use of the automated car wash for Town Pool Vehicles this year.

Trucks were washed at the truck wash operated by MDC when weather conditions allowed.

Winter weather road treatment

Responsible Party: Lou Spina, Director of Public Works

Reduce or eliminate the use of sand on winter road conditions. Sand can enter catch basins and be transported to the receiving water bodies via existing outfalls. Sand also adds increased costs for road sweeping and catch basin cleaning operations.

Start Date: 12/19/2016

End Date: 12/20/2016

Percentage of work that has been accomplished for this BMP: 100 %

Work performed for the BMP listed above

Date: 1/1/2016 **Responsible Party: Lou Spina, Director of Public Works**

Treated Salt use

Treated salt was once again for snow plowing operations. No sand was used. Magnesium chloride salt was used in the winter of 15/16 and molasses treated salt was purchased/used for the winter of 16/17.



TOWN OF CROMWELL

41 West Street
Cromwell, CT 06416

Certified Mail# 7015 1520 0000 5865 1046

August 17, 2016

Ms. Carol D. Papp
Environmental Analyst CTDEP
State of Connecticut, DEP
79 Elm Street
Hartford, CT 06106-2015

Re: General Permit for MS4, Town of Cromwell
Stormwater Monitoring Report

Dear Ms. Papp:

On behalf of the Town of Cromwell, we are submitting documentation relative to the reporting of Stormwater Monitoring. The following documents are being provided for the following MS4 locations: Court Street and Kristen Lane (Residential); New Lane and Sebeth Drive (Industrial); Stop & Shop and McDonald's (Commercial):

1. Chain of Custody Forms
2. Stormwater Monitoring Reporting Forms
3. Rainfall event data, as monitored in Cromwell, for the period of June 30, 2016 through July 29, 2016

Should you have any questions, please do not hesitate to contact me, at 860-632-3465.

Very truly yours,

Jon C. Harriman, P.E.
Town Engineer

Date Samples Received: 07/29/16

Client Name : Town of Cromwell	CTL Lab No. : 0716453
Report Date : 08/16/16	PO/ Job No. : NA

RESULTS OF ANALYSIS

Matrix Type :	W	W	W
CTL Sample No.	11667	11668	11669
Field ID :	Kristen Lane	New Lane	Court St.

Parameters	RL				Method No.
pH	0.1	7.2	6.3	7.5	4500-H ⁺ B
Hardness-mg/L	2	28	8	88	2340B
Spec. Cond.-umhos/cm	1	107	29	294	2510B
Total Oil & Grease-mg/L	5	ND	ND	ND	1664A
COD-mg/L	4	34	56	39	410.4
Turbidity-NTU	0.5	2.6	24.8	6.3	180.1
Total Susp. Solids-mg/L	1	5	12	5	2540D
Total Phosphorus-P-mg/L	0.01	0.42	0.18	0.11	365.3
Ammonia-N-mg/L	0.05	0.48	0.49	0.42	350.1
TKN-mg/L	0.05	1.23	1.14	1.24	351.2
Nitrate + Nitrite-N-mg/L	0.1	0.6	0.4	1.5	4500-NO ₃ F
E.Coli / 100ml	----	Present	Present	Present	9223B

Matrix Type: W= Water/Aqueous **S=** Soil/Solid **O=** Oil/Hydrocarbon

RL= Reporting Limit **ND=** Not Detected

Method Numbers Referenced From:

EPA-600/4-79-020. Methods for Chemical Analysis of Water and Wastes. March 1983.
Standard Methods for the Examination of Water and Wastes. 19th Edition. APHA, AWWA, WPCF. 1995
N-Hexane Extractable Material (HEM) by Extraction and Gravimetry (Oil and Grease). April 1995. USEPA

Connecticut Testing Laboratories, Inc.
165 Gracey Avenue / Meriden, CT 06451
(203) 634-3731 (Fax) 630-1336
Certification CT-PH0547/ MA-CT035

Date Samples Received: 07/29/16

Client Name : Town of Cromwell	CTL Lab No. : 0716453
Report Date : 08/16/16	PO/ Job No. : NA

RESULTS OF ANALYSIS

Matrix Type :	W	W	W
CTL Sample No.	11670	11671	11672
Field ID :	Sebeth Dr.	McDonalds	Stop & Shop

Parameters	RL				Method No.
pH	0.1	7.3	7.3	7.3	4500-H ⁺ B
Hardness-mg/L	2	40	104	32	2340B
Spec. Cond.-umhos/cm	1	231	578	154	2510B
Total Oil & Grease-mg/L	5	ND	ND	ND	1664A
COD-mg/L	4	21	35	42	410.4
Turbidity-NTU	0.5	14.7	12.8	12.0	180.1
Total Susp. Solids-mg/L	1	7	6	6	2540D
Total Phosphorus-P-mg/L	0.01	0.07	0.09	0.12	365.3
Ammonia-N-mg/L	0.05	0.12	0.20	0.22	350.1
TKN-mg/L	0.05	0.49	0.67	0.91	351.2
Nitrate + Nitrite-N-mg/L	0.1	0.6	0.3	0.6	4500-NO ₃ F
E.Coli / 100ml	----	Present	Present	Present	9223B

Matrix Type: W= Water/Aqueous S= Soil/Solid O= Oil/Hydrocarbon

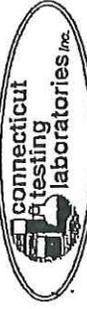
RL= Reporting Limit ND= Not Detected

Method Numbers Referenced From:

EPA-600/4-79-020. Methods for Chemical Analysis of Water and Wastes. March 1983.
Standard Methods for the Examination of Water and Wastes, 19th Edition. APHA, AWWA, WPCF. 1995
N-Hexane Extractable Material (HEM) by Extraction and Gravimetry (Oil and Grease). April 1995. USEPA

Connecticut Testing Laboratories, Inc.
 165 Gracey Avenue / Meriden, CT 06451
 (203) 634-3731 (Fax) 630-1336
 Certification CT-PH0547/ MA-CT035

CHAIN OF CUSTODY RECORD



Lab Tracking #: _____

CTL Client: Town of Cromwell

Client PO #: _____

Sampler(s): Michael Stevens Medulla (print)

Requested Analyses

E-COLI
PH, TSS, NO₃-N TOC
CD, NH₃, TKNIT

MS4

Preserv Code

Matrix

Time

Date

Field ID (please print)

Lab Use

Container Type Code

Total Number of Containers

Lab Use	Field ID (please print)	Date	Time	Matrix	Preserv Code	Container Type Code	Total Number of Containers
	Kristen Lane	7/29/16	8:45am	W		P A6 P P	4
	New Lane		9:00am				4
	Court Street		9:25am				4
	Sebethe Dr.		9:45am				4
	McDonald's		9:55am				4
	STOP & SHOP		10:10am	↓		↓ ↓ ↓ ↓	4

REPORT INFORMATION

Sand Report To: JON HARKIMAN

Email Report To: Jharkiman@CromwellCT.Conn

Quote ID

Invoice To: JON HARKIMAN

Fax Report To: 860-632-3477

RSR Criteria (Check One) GWP GA SWP

Relinquished By: (Signature) [Signature] Date / Time 7/29/16 12:00pm

Relinquished By: (Signature) _____ Date / Time _____

Container Types : P = Plastic C = Cube AG = Amber Glass V = EPA Vial S = Sterile T = Tedlar Bag

Matrix : A = Air W = Water DW = Drinking Water S = Soil WP = Wipe

5035 Preservation : M = Methanol SB = Sodium Bisulfate EY = Empty Vial W = Water En = Encore Type

DATA REPORT TYPE

- RCP
- Excel
- PDF
- State EDI
- Other*
- Email

*Specify

Received By: (Signature) _____ Date / Time _____

Received By: (Signature) _____ Date / Time _____

Received By Laboratory: (Signature) [Signature] Date / Time 7/29/16 1201

Samples Iced _____

Temp C: _____

Date Encloses Frozen: _____

Turn Around Time

24 HR*

3 Day*

5 Day

48 HR*

4 Day*

10 Day

CTL will not be held liable for incorrectly filled out Chain of Custody Records.

Samples held for 45 days from receipt.

*Turnaround times less than " 5 Days" may be subject to priority fee charges.

Connecticut Testing Laboratories, Inc.

165 Gracey Ave. / Meriden, CT 06451

Tel. (203) 634-3731 / Fax (203) 630-1336

ORIGINAL



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

Please send completed form to: STORMWATER GROUP
 BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 79 ELM STREET
 HARTFORD, CT 06106-5127

PERMITTEE INFORMATION

Town: Town of Cromwell

Mailing Address: 41 West Street Cromwell CT 06416

Contact Person: Jon Harriman, P.E. Title: Town Engineer

Phone: 860-632-3465 Permit Registration #GSM: 000061

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): Court Street Easting 1021500 / Northing 788150

Please check the appropriate area description: Industrial Commercial Residential

Receiving Water (name, basin): Mattabesset River

Time of Start of Discharge: _____

Date/Time Collected: 29-Jul-16 @ 0925 Water Temperature: _____

Person Collecting Sample: Jon Harriman/Mike Shewokis

Storm Magnitude (inches): .280" Storm Duration (hours): _____

Date of Previous Storm Event: 22-Jul-2016

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	4500-H+B	7.5 (S.U.)	CTL, Inc.
Rain pH			
Hardness	2340B	88 (mg/L)	CTL, Inc.
Conductivity	2510B	294 (umhos/cm)	CTL, Inc.
Oil & Grease	1664A	ND (mg/L)	CTL, Inc.
COD	410.4	39 (mg/L)	CTL, Inc.
Turbidity	180.1	6.3 (NTU)	CTL, Inc.
TSS	2540D	5 (mg/L)	CTL, Inc.
TP	365.3	0.11 (mg/L)	CTL, Inc.
Ammonia	350.1	0.42 (mg/L)	CTL, Inc.
TKN	351.2	1.24 (mg/L)	CTL, Inc.
NO ₃ +NO ₂	4500-NO3 F	1.5 (mg/L)	CTL, Inc.
E. coli	9222B	Present	CTL, Inc.

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Jon Harriman, P.E.

Signature: (Print Name) Date: 08/17/16



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

Please send completed form to: STORMWATER GROUP
 BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 79 ELM STREET
 HARTFORD, CT 06106-5127

PERMITTEE INFORMATION

Town: <u>Town of Cromwell</u>	
Mailing Address: <u>41 West Street Cromwell CT 06416</u>	
Contact Person: <u>Jon Harriman, P.E.</u>	Title: <u>Town Engineer</u>
Phone: <u>860-632-3465</u>	Permit Registration #GSM: <u>000061</u>

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>Kristen lane Easting 1025980 / Northing 776710</u>	
Please check the appropriate area description: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Mattabesset River</u>	
Time of Start of Discharge: _____	
Date/Time Collected: <u>29-Jul-16 @ 0845</u>	Water Temperature: _____
Person Collecting Sample: <u>Jon Harriman/Mike Shewokis</u>	
Storm Magnitude (inches): <u>.280"</u>	Storm Duration (hours): _____
Date of Previous Storm Event: <u>22-Jul-2016</u>	

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	4500-H+B	7.2 (S.U.)	CTL, Inc.
Rain pH			
Hardness	2340B	28 (mg/L)	CTL, Inc.
Conductivity	2510B	107 (umhos)	CTL, Inc.
Oil & Grease	1664A	ND (mg/L)	CTL, Inc.
COD	410.4	34 (mg/L)	CTL, Inc.
Turbidity	180.1	2.6 (NTU)	CTL, Inc.
TSS	2540D	5 (mg/L)	CTL, Inc.
TP	365.3	0.42 (mg/L)	CTL, Inc.
Ammonia	350.1	0.48 (mg/L)	CTL, Inc.
TKN	351.2	1.23 (mg/L)	CTL, Inc.
NO ₃ +NO ₂	4500-NO3 F	0.6 (mg/L)	CTL, Inc.
E. coli	9222B	Present	CTL, Inc.

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>Jon Harriman, P.E.</u>	
Signature: <u><i>Jon Harriman</i></u>	Date: <u>08/17/16</u>



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

Please send completed form to: STORMWATER GROUP
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

PERMITTEE INFORMATION

Town: <u>Town of Cromwell</u>	
Mailing Address: <u>41 West Street Cromwell CT 06416</u>	
Contact Person: <u>Jon Harriman, P.E.</u>	Title: <u>Town Engineer</u>
Phone: <u>860-632-3465</u>	Permit Registration #GSM: <u>000061</u>

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>New Lane Easting 1027480 / Northing 779860</u>		
Please check the appropriate area description: <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential		
Receiving Water (name, basin): <u>Connecticut River</u>		
Time of Start of Discharge: _____		
Date/Time Collected: <u>29-Jul-16 @ 0900</u>	Water Temperature: _____	
Person Collecting Sample: <u>Jon Harriman/Mike Shewokis</u>		
Storm Magnitude (inches): <u>.280"</u>	Storm Duration (hours): _____	
Date of Previous Storm Event: <u>22-Jul-2016</u>		

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	4500-H+B	6.3 (S.U.)	CTL, Inc.
Rain pH			
Hardness	2340B	8 (mg/L)	CTL, Inc.
Conductivity	2510B	29 (umhos)	CTL, Inc.
Oil & Grease	1664A	ND (mg/L)	CTL, Inc.
COD	410.4	56 (mg/L)	CTL, Inc.
Turbidity	180.1	24.8 (NTU)	CTL, Inc.
TSS	2540D	12 (mg/L)	CTL, Inc.
TP	365.3	0.18 (mg/L)	CTL, Inc.
Ammonia	350.1	0.49 (mg/L)	CTL, Inc.
TKN	351.2	1.14 (mg/L)	CTL, Inc.
NO ₃ +NO ₂	4500-NO3 F	0.4 (mg/L)	CTL, Inc.
E. coli	9222B	Present	CTL, Inc.

STATEMENT OF ACKNOWLEDGMENT

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Authorized Official: <u>Jon Harriman, P.E.</u>	
Signature:	Date: <u>08/17/16</u>



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 HARTFORD, CT 06106-5127

PERMITTEE INFORMATION

Town: Town of Cromwell

Mailing Address: 41 West Street Cromwell CT 06416

Contact Person: Jon Harriman, P.E. Title: Town Engineer

Phone: 860-632-3465 Permit Registration #GSM: 000061

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): Stop & Shop Easting 1019370 / Northing 779930

Please check the appropriate area description: Industrial Commercial Residential

Receiving Water (name, basin): Mattabesset River

Time of Start of Discharge: _____

Date/Time Collected: 29-Jul-16 @ 0100 Water Temperature: _____

Person Collecting Sample: Jon Harriman/Mike Shewokis

Storm Magnitude (inches): .280" Storm Duration (hours): _____

Date of Previous Storm Event: 22-Jul-2016

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	4500-H+B	7.3 (S.U.)	CTL, Inc.
Rain pH			
Hardness	2340B	32 (mg/L)	CTL, Inc.
Conductivity	2510B	154 (umhos)	CTL, Inc.
Oil & Grease	1664A	ND (mg/L)	CTL, Inc.
COD	410.4	42 (mg/L)	CTL, Inc.
Turbidity	180.1	12.0 (NTU)	CTL, Inc.
TSS	2540D	6 (mg/L)	CTL, Inc.
TP	365.3	0.12 (mg/L)	CTL, Inc.
Ammonia	350.1	0.22 (mg/L)	CTL, Inc.
TKN	351.2	0.91 (mg/L)	CTL, Inc.
NO ₃ +NO ₂	4500-NO3 F	.6 (mg/L)	CTL, Inc.
E. coli	9222B	Present	CTL, Inc.

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Authorized Official: Jon Harriman, P.E.

Signature: Jon Harriman (Print Name) Date: 08/17/16



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

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 79 ELM STREET
 HARTFORD, CT 06106-5127

PERMITTEE INFORMATION

Town: Town of Cromwell

Mailing Address: 41 West Street Cromwell CT 06416

Contact Person: Jon Harriman, P.E. Title: Town Engineer

Phone: 860-632-3465 Permit Registration #GSM: 000061

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): Sebethe Drive Easting 1011590 / Northing 784270

Please check the appropriate area description: Industrial Commercial Residential

Receiving Water (name, basin): Mattabesset River

Time of Start of Discharge: _____

Date/Time Collected: 29-Jul-16 @ 0945 Water Temperature: _____

Person Collecting Sample: Jon Harriman/Mike Shewokis

Storm Magnitude (inches): .280" Storm Duration (hours): _____

Date of Previous Storm Event: 22-Jul-2016

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	4500-H+B	7.3 (S.U.)	CTL, Inc.
Rain pH			
Hardness	2340B	40 (mg/L)	CTL, Inc.
Conductivity	2510B	231 (umhos)	CTL, Inc.
Oil & Grease	1664B	ND (mg/L)	CTL, Inc.
COD	410.4	21 (mg/L)	CTL, Inc.
Turbidity	180.1	14.7 (NTU)	CTL, Inc.
TSS	2540D	7 (mg/L)	CTL, Inc.
TP	365.3	0.07 (mg/L)	CTL, Inc.
Ammonia	350.1	0.12 (mg/L)	CTL, Inc.
TKN	351.2	0.49 (mg/L)	CTL, Inc.
NO ₃ +NO ₂	4500-NO3 F	0.6 (mg/L)	CTL, Inc.
E. coli	9222B	Present	CTL, Inc.

STATEMENT OF ACKNOWLEDGMENT

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Authorized Official: Jon Harriman, P.E.
 (Print Name)

Signature: *Jon Harriman* Date: 08/17/16



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

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 HARTFORD, CT 06106-5127

PERMITTEE INFORMATION

Town: <u>Town of Cromwell</u>	
Mailing Address: <u>41 West Street Cromwell CT 06416</u>	
Contact Person: <u>Jon Harriman, P.E.</u>	Title: <u>Town Engineer</u>
Phone: <u>860-632-3465</u>	Permit Registration #GSM: <u>000061</u>

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>McDonald's Easting 1011510 / Northing 780740</u>	
Please check the appropriate area description: <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Mattabesset River</u>	
Time of Start of Discharge: _____	
Date/Time Collected: <u>29-Jul-16 @ 0955</u>	Water Temperature: _____
Person Collecting Sample: <u>Jon Harriman/Mike Shewokis</u>	
Storm Magnitude (inches): <u>.280"</u>	Storm Duration (hours): _____
Date of Previous Storm Event: <u>22-Jul-2016</u>	

MONITORING RESULTS

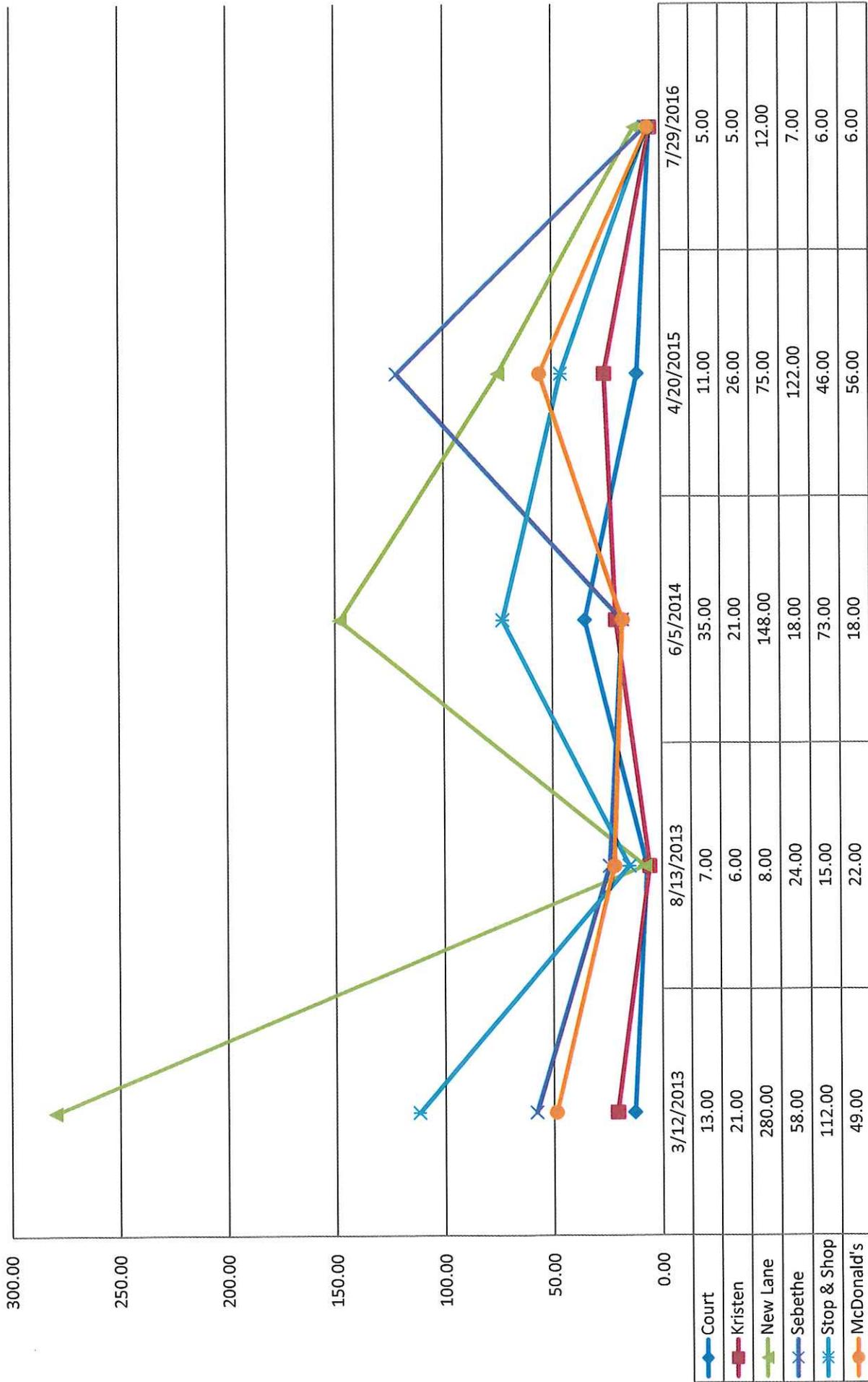
Parameter	Method	Results (units)	Laboratory
Sample pH	4500-H+B	7.3 (S.U.)	CTL, Inc.
Rain pH			
Hardness	2340B	104 (mg/L)	CTL, Inc.
Conductivity	2510B	578 (umhos)	CTL, Inc.
Oil & Grease	1664A	ND (mg/L)	CTL, Inc.
COD	410.4	35 (mg/L)	CTL, Inc.
Turbidity	180.1	12.8 (NTU)	CTL, Inc.
TSS	2540D	6 (mg/L)	CTL, Inc.
TP	365.3	0.09 (mg/L)	CTL, Inc.
Ammonia	350.1	0.20 (mg/L)	CTL, Inc.
TKN	351.2	0.67 (mg/L)	CTL, Inc.
NO ₃ +NO ₂	4500-NO3 F	0.3 (mg/L)	CTL, Inc.
E. coli	9222B	Present	CTL, Inc.

STATEMENT OF ACKNOWLEDGMENT

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Authorized Official: <u>Jon Harriman, P.E.</u>	
Signature: <u></u>	Date: <u>08/17/16</u>

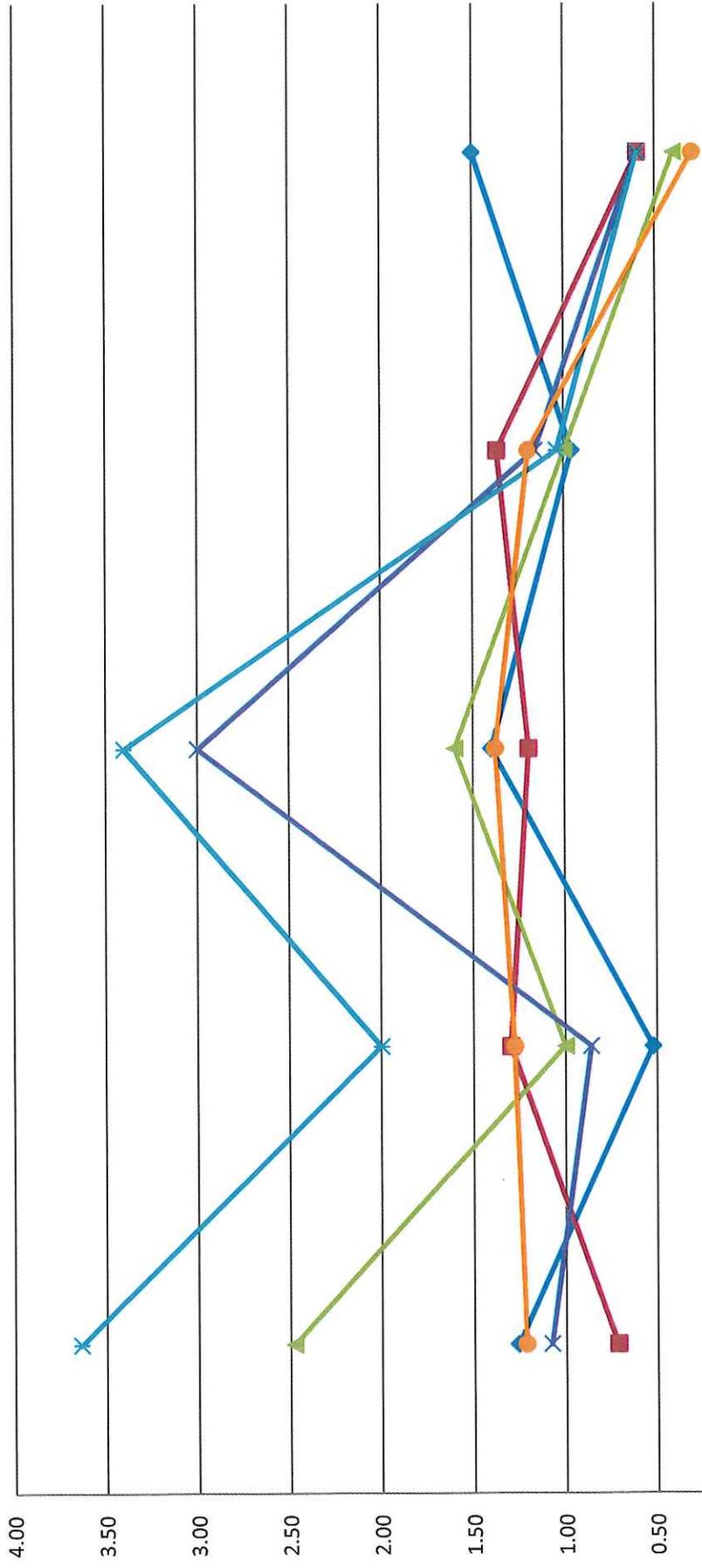
Town of Cromwell	RAINFALL-L
TOTAL FLOW	
June 30, 2016	0.000
July 1, 2016	0.460
July 2, 2016	0.010
July 3, 2016	0.000
July 4, 2016	0.000
July 5, 2016	0.710
July 6, 2016	0.010
July 7, 2016	0.130
July 8, 2016	0.000
July 9, 2016	0.010
July 10, 2016	0.010
July 11, 2016	0.000
July 12, 2016	0.000
July 13, 2016	0.000
July 14, 2016	1.250
July 15, 2016	0.010
July 16, 2016	0.000
July 17, 2016	0.000
July 18, 2016	0.010
July 19, 2016	0.010
July 20, 2016	0.000
July 21, 2016	0.000
July 22, 2016	0.120
July 23, 2016	0.010
July 24, 2016	0.000
July 25, 2016	0.080
July 26, 2016	0.010
July 27, 2016	0.000
July 28, 2016	0.000
July 29, 2016	0.280

MS4 Results Total Suspended Solids (TSS) mg/L



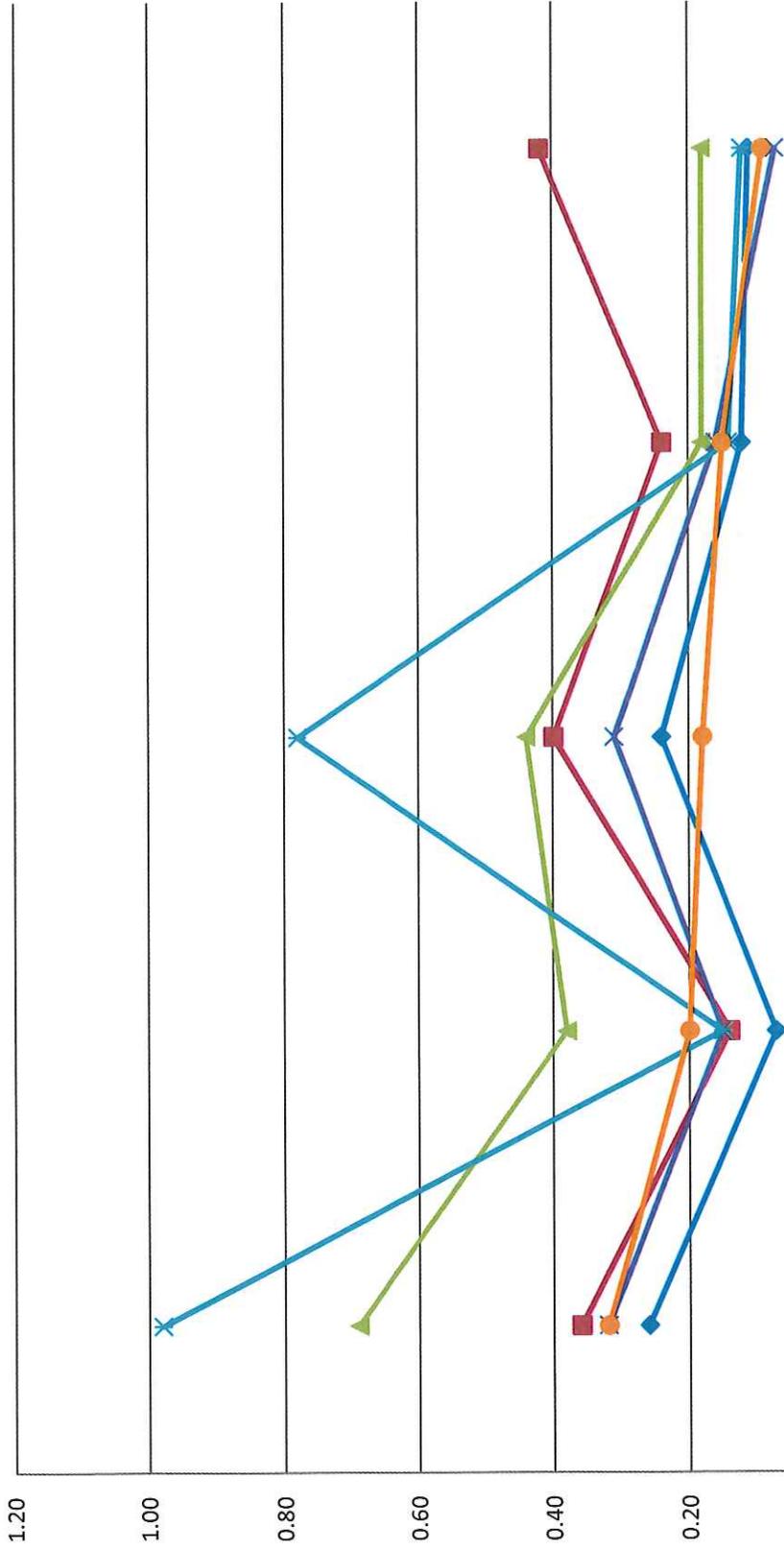
MS4 Results Nitrogen mg/L

Threshold 2.5 mg/L



	3/12/2013	8/13/2013	6/5/2014	4/20/2015	7/29/2016
Court	1.26	0.52	1.40	0.96	1.50
Kristen	0.72	1.30	1.20	1.37	0.60
New Lane	2.48	1.00	1.60	1.00	0.40
Sebethe	1.08	0.86	3.00	1.16	0.60
Stop & Shop	3.64	2.00	3.40	1.04	0.60
McDonald's	1.22	1.28	1.38	1.20	0.30

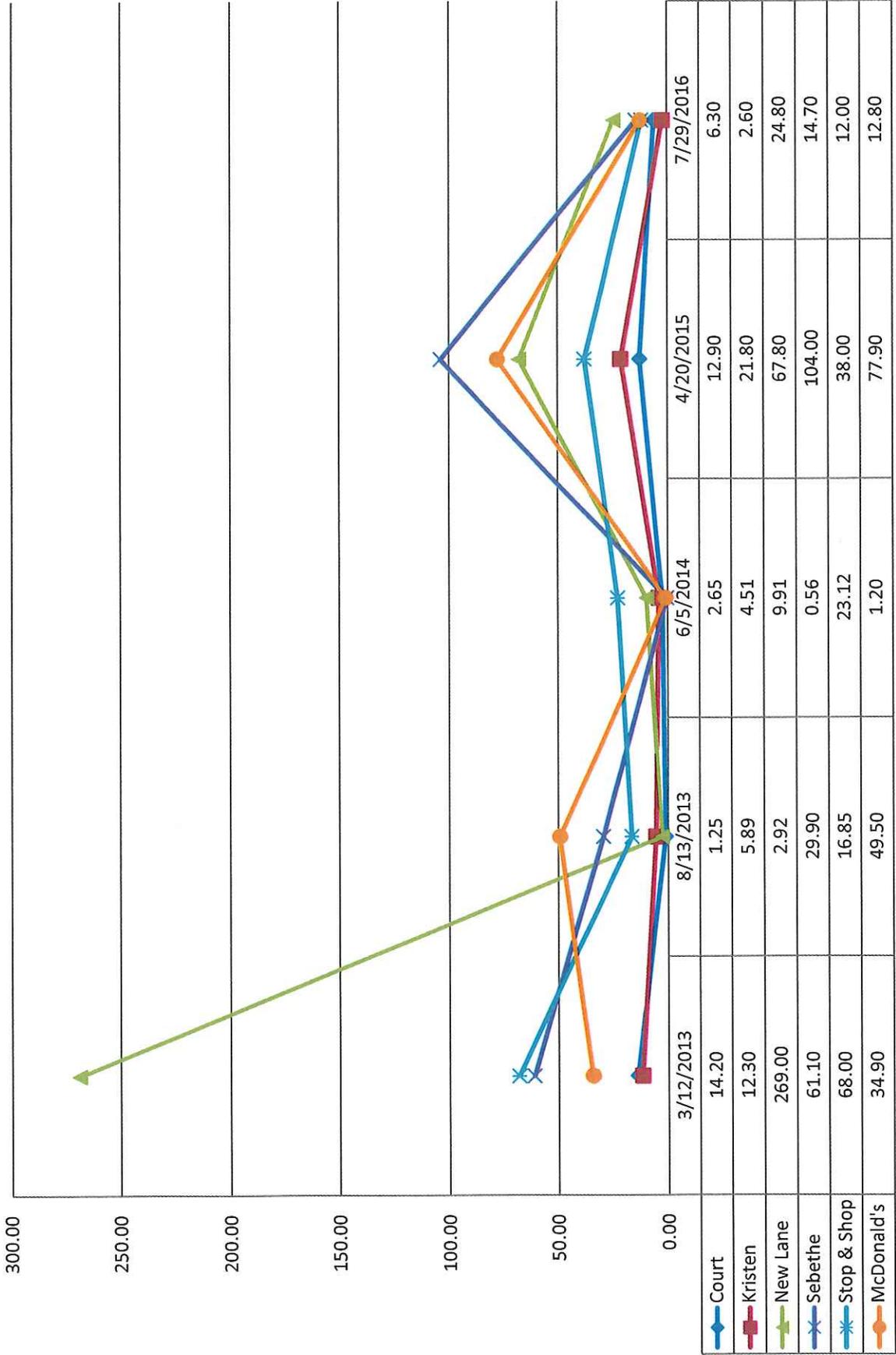
MS4 Results Phosphorus mg/L Threshold 0.3 mg/L



	3/12/2013	8/13/2013	6/5/2014	4/20/2015	7/29/2016
Court	0.26	0.07	0.24	0.12	0.11
Kristen	0.36	0.14	0.40	0.24	0.42
New Lane	0.69	0.38	0.44	0.18	0.18
Sebethe	0.32	0.15	0.31	0.16	0.07
Stop & Shop	0.98	0.15	0.78	0.14	0.12
McDonald's	0.32	0.20	0.18	0.15	0.09

MS4 Results Turbidity NTU

Threshold = 5 NTU



MS4 Results Bacteria (E-Coli) cfu/100ml Threshold 410 cfu/100ml

